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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/774,966

02/09/2004

Cyril Goutte

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07/26/2006

Patent Documentation Center

Xerox Corporation

Xerox Square 20th Floor

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EXAMINER

PANNALA, SATHYANARAYA R

ART UNIT

PAPER NUMBER

2164

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,966

Applicant(s)

GOUTTE ET AL.

Examiner

Sathyanarayan Pannala

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/9/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Application No. 10/774966 filed on 2/9/2004 has been examined. In this Office Action, claims 1-10 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 2/9/2004 is in compliance with the provisions of 37 CFR 1.97 and has been considered by the examiner.

Specification

3. The Abstract is objected, because the abstract is a copy of the description first paragraph, See MPEP 608.01(b). Corrected abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly

those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph. Regarding claim 1, the phrase "such that" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-2, 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCallum ("Multi-Label Text Classification with a Mixture Model Trained by EM", Just Research, Pittsburgh, PA) hereinafter McCallum, and in view of Campos et al. (US Patent 7,080,063) hereinafter Campos.

8. As per independent claim 1, McCallum teaches a Bayesian approach to multicalss, multilabel document classification by defining a probabilistic generative model (page 1, paragraph 3). McCallum teaches the claimed, defining a set of

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categories in which at least one category in the set is dependent on another category in the set, organizing the set of categories in a hierarchy that embodies any dependencies among the categories in the set, and for each object, assigning to the object one or more categories $i.sub.1 \dots i.sub.P$ where $i.sub.i.epsilon.[1 \dots L]$ from a set $[1 \dots L]$ of possible categories, wherein the assigned categories represent a subset of categories for which the object is relevant defining a new set of labels z comprising all possible combinations of any number of the categories, $z.epsilon.[[1],[2], \dots [L],[1,2], \dots [1,L],[2,3], \dots [1,2,3], \dots [1,2, \dots L]]$, such that if an object is relevant to several categories, the object must be assigned the unique label z corresponding to the subset of all relevant categories (page 2, paragraph last). McCallum does not explicitly teach assigning objects to several categories. However, Campos teaches the claimed, assigning to the object the several categories and the subcategories of the several categories (col. 4, lines 36-40). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Campos' teachings would have allowed McCallum's method to provide a technique to perform cluster analysis to improve performance in model building and data mining (col. 1, line 66 to col. 2, line 1).

9. As per dependent claim 2, McCallum teaches the claimed, an object comprises a document d generated by co-occurrence of words within the document (page 4, paragraph last).

10. As per dependent claim 4, McCallum teaches the claimed, an object is expressed as a vector in an arbitrary vector space (page 4, paragraph first).

11. As per dependent claim 5, McCallum does not explicitly teach assigning objects to several categories. However, Campos teaches the claimed, the set of categories further includes an independent category for including objects that fit none of the other categories in the set (col. 7, line 65 to col. 8, line 1). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Campos' teachings would have allowed McCallum's method to provide a technique to perform cluster analysis to improve performance in model building and data mining (col. 1, line 66 to col. 2, line 1).

12. As per dependent claim 6, McCallum teaches the claimed, the hierarchy comprises a directed acyclic graph (page 5, paragraph four).

13. As per dependent claim 7, McCallum teaches the claimed, the hierarchy organizes the sets of categories which embodies dependencies between the categories (page 5, paragraph last).

Allowable Subject Matter

14. Claim 3, 8-10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sathyanarayan Pannala
Examiner
Art Unit 2164

srp
July 24, 2006